REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested. Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

Status of Claims

Claims 1-10, 12 and 13 are pending. Claims 1, 3 and 8 have been objected to. Claims 1-10, 12 and 13 have been rejected. Claims 1, 3 and 7 have been amended. Claim 11 has been previously canceled without prejudice or disclaimer.

Applicants respectfully assert that the amendments to the claims and the specification add no new matter.

Claim Objections

In the Office Action, the Examiner objected to claims 1 and 3 because of alleged informalities. Claims 1 and 3 have been amended in order to cure these informalities. Accordingly, Applicants request withdrawal of the objection.

Claim 8 was objected to by the Examiner as being of improper dependent form since the only two options are a continuous or batch mode, and therefore, according to the Examiner, claim 8 does not further limit claim 1. Applicants assert that claim 8 limits claim 1 by excluding a third option *i.e.* the semi-continuous mode, which is different both from a continuous mode and from a batch mode. Accordingly, Applicants request withdrawal of the objection.

CLAIM REJECTIONS

35 U.S.C. § 112 Rejections

In the Office Action, the Examiner rejected claims 1-10 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim

the subject matter which applicant regards as the invention.

Claim 1 has been amended to overcome the deficiencies noted by the Examiner, particularly amending step (c) to relate to the distillation of the permeate rather than the distillation of the retentate. This amendment is supported for example in the drawings. Further, claim 7 has been amended to reflect a specific length of time, i.e., at least 30 minutes, supported for example in the specification one page 8, lines 24-26 and page 9, lines 19-22.

The Examiner rejects claims 1-10 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention, particularly since, according to the Examiner, the Application does not state the difference between reverse osmosis membranes and nanofiltration membranes. Applicants respectfully traverse this rejection since both nanofiltration membranes and reverse osmosis membranes are both terms that are well known in the art, so that a person of ordinary skill would know the difference between the two, and would be able to asses whether a certain membrane is an a nanofiltration membrane or a reverse osmosis membrane.

It is specifically noted that, as known to those familiar in the art, nanofiltration membranes have two unique features: (a) selectively rejecting neutral solutes that have a molecular weight of 200-1000dalton; and (b) selectively rejecting salts according to their ionic charge, and differentiating monovalent ions from bivalent or multivalent ions. In order to achieve those features, nanofiltrations membranes *have larger pores than* reverse osmosis membrane, and therefore, an artisan would be able to differentiate between the two. Further, as mentioned in the specification, reverse osmosis membranes usually require very high pressures, generally higher than 40 bar (page 3, lines 1-3). In contrast, the pressure required for the nanofiltration separation process of claims 1-10 is up to 40bar. The use of lower pressures when implementing nanofiltration membranes is mentioned also in the specification (see page 4, line 9 as well as the examples in the Examples section).

Applicants respectfully assert that the amendments render claims 1-10 proper under 35 USC § 112 and request that the 35 USC § 112 rejections be withdrawn.

35 U.S.C. § 102 Rejection

In the Office Action, the Examiner rejected claims 1, 2, 8, 10, 12 and 13 under 35 U.S.C. § 102(b), as being anticipated by Lee *et al.* (US 5,013,447). Applicants respectfully traverse this rejection in view of the remarks that follow.

Lee *et al.*, discloses a vapor-arbitrated pervaporation process, which according to Lee *et al.* is defined as follows in column 10, lines 60-68:

> Vapor-arbitrated pervaporation is a membrane process in which one side of a semi-permeable membrane is in contact with a feed liquid containing one or more volatile substances, and the second side of the membrane is exposed either to a sweep gas stream comprising a non-condensable gas and a regulated quantity of one of the said volatile substances, or to a partial vacuum containing a regulated quantity of one of the said volatile substances.

Thus, Lee *et al.* discloses a process in which the second side of the membrane is continuously cleared of the permeate by either a sweep gas stream or partial vacuum. Therefore, the process disclosed by Lee *et al.* is a concentration driven membrane separation process, i.e., since the permeate is continually swept away from the membrane the concentration of the volatile substances is relatively small on the second side of the membrane, thereby causing the passage of additional volatile substances from the first side to the second side of the membrane.

As specifically detailed in Lee *et al.* (Section 2.1.6), col. 7, lines 35-46, pervaporation is a membrane mediated evaporation process, wherein the selectivity of the pervaporation is governed by the permselectivity of the membrane.

As such, Lee *et al.* cannot teach or suggest the nanofiltration process of claim 1, which is substantially different from the pervaporation method used by Lee *et al.* because as is known to those familiar with the art, nanofiltration separation methods are pressure mediated separations through nanofiltration membranes.

As detailed in the specification of the above-referenced Application, nanofiltration separation methods require pressures that are much higher than pervaporation methods, which, as specifically noted by Lee *et al.*, and as cited by the Examiner (Section 15 of the

Office Action); "The alcoholic beverage may be processed at or near atmospheric pressure" (Column 21, lines 20-21).

In contrast, the nanofiltration separation method used according to the claimed invention of the above-referenced application may use pressure prior to entering the nanofiltration membrane module. (E.g., as specifically mentioned in the Application, Experimental Part, page 7, lines 14-16), and in both Examples 1 and 2 wherein the wine is initially pressurized at 15bar (page 8, line 11 and page 9, line 6).

Accordingly, amended claim 1, which requires that the beverage is pressurized at a maximum 40bar, is not suggested or taught by Lee *et al.* Moreover, since Lee *et al.* specifically notes that it is possible to perform the process disclosed therein at or near atmospheric pressure, Lee *et al.* essentially teaches away from the invention of amended claim 1.

Accordingly, Applicants respectfully assert that amended independent claim 1 is allowable. Each of claims 2, 8, 10, 12 and 13 depends, directly or indirectly, from claim 1, and therefore includes all the limitations of that claim. Therefore, Applicants respectfully assert that claims 2, 8, 10, 12 and 13 are likewise allowable. Accordingly, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. § 102(b) rejections to amended independent claim 1 and to claims 2, 8, 10, 12 and 13, dependent thereon.

35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 3, 9 and 12 under 35 U.S.C. § 103(a), as being unpatentable over Lee *et al.* Claim 4 was rejected under 35 U.S.C. § 103(a), as being unpatentable over Lee *et al.* in view of Galzy *et al.* (US 4,610,887). Claims 5-7 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Lee *et al.* in view of Galzy *et al.* and further in view of Gan *et al.* (J. of Membrane Science 155 (1999) 277-289).

Regarding the rejection of claims 3, 9 and 12, the Applicants respectfully traverse the rejection of these claims as being unpatentable over Lee *et al.* As is explained above (in relation to the 35 U.S.C. § 102(b), Lee *et al.* discloses a pervaporation separation method that is substantially different from method according to the claimed invention.

As detailed above, the pervaporation method disclosed by Lee *et al.* requires that the permeate be continually removed from the membrane area by evaporation, while the claims of the present Application require the step of circulating the beverage from a feed tank, pressurized at a maximum 40 bar, tangentially to a nanofiltration (NF) membrane to obtain two streams: i. one of retentate that does not cross the nanofiltration (NF) membrane; and ii. one of permeate that crosses the nanofiltration (NF) membrane and is composed of water, ethanol and salts. The presently claimed method and that of Lee *et al.* are substantially different. Embodiments of the claimed method may require pressure for removing the permeate through the membrane. The invention disclosed in the process of Lee *et al.* is mediated by evaporation that is a concentration driven membrane separation process, i.e., since the permeate is continually swept away from the membrane, the concentration of the volatile substances is relatively small on the second side of the membrane, thereby causing the passage of additional volatile substances from the first side to the second side of the membrane.

Accordingly, as detailed above, Applicants respectfully assert that amended independent claim 1 is novel and is not obvious in view of Lee *et al.*, and that claims 3, 9 and 12, dependent, directly or indirectly, therefrom, include all the limitations of that claim. Therefore, Applicants respectfully assert that claims 3, 9 and 12 are likewise allowable. Accordingly, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. § 103(a) rejections to claims 3, 9 and 12.

Applicants respectfully traverse the rejection of claim 4 as being unpatentable over Lee *et al.* in view of Galzy *et al.* Applicants assert that neither Lee *et al.* nor Galzy *et al.*, alone or in combination, teach or suggest the pressure mediated nanofiltration process of amended claim 1, or of any of the claims dependent therefrom, including claim 4.

As detailed above, the process of amended claim 1 is substantially different from the evaporation mediated pervaporation process disclosed in Lee *et al.* Further, Galzy *et al.* does not teach or suggest, and the Examiner does not assert that Galzy *et al.* teaches or suggests, the process of amended claim 1. According to the Examiner, Galzy *et al.* teaches the prevention of the plugging up of the membrane by washing it with water (Section 31 of the Office Action). This does not teach or suggest the claim elements of amended claim 1.

Therefore, the combination of Lee *et al.* and Galzy *et al.* does not teach or suggest the claim elements of amended claim 1 or of claim 4, dependent therefrom, and applicants request that the 35 USC § 103 rejection of claim 4 should be withdrawn.

Applicants respectfully traverse the rejection of claims 5-7 as being unpatentable over Lee *et al.* in view of Galzy *et al.* and further in view of Gan *et al.* Applicants assert that neither Lee *et al.* nor Galzy *et al.* nor Gan *et al.*, alone or in combination, teach or suggest the pressure mediated nanofiltration process of amended claim 1, or of any of the claims dependent therefrom, including claims 5-7.

As detailed above, the process of amended claim 1 is substantially different from the evaporation mediated pervaporation process disclosed in Lee *et al.* Further, neither Galzy *et al.* nor Gan *et al.* teach or suggest, and the Examiner does not assert that they teach or suggest, the process of amended claim 1. According to the Examiner, Galzy *et al.* teaches cleaning the membrane by recirculation water at room temperature (Section 37 of the Office Action). This does not teach or suggest the claim elements of amended claim 1. Further, according to the Examiner, Gan teaches cleaning membranes at temperatures of 20-80°C and pH of 1-13.5, which also does not teach or suggest the claim elements of amended claim 1. Therefore, the combination of Lee *et al.*, Galzy *et al.* and Gan *et al.* does not teach or suggest the claim elements of amended claim 1 or of claims 5-7, dependent therefrom. Accordingly, Applicants respectfully assert that the 35 USC § 103 rejections of claims 5-7 should be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicants assert that the pending claims are allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

The fees for the petition for extension of time are being paid separately. No other fees are believed to be due. However, if any such fees are due, please charge any such fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,

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